UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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ART UNIT	PAPER NUMBER
3661	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/797,555	WON ET AL.
	Examiner	Art Unit	
	CHRISTINE M. BEHNCKE	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 February 2008_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-16, 18-32, and 34-47_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-16,18-32 and 34-47_ is/are rejected.
7)☒ Claim(s) _19_ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☒ All   b)☐ Some * c)☐ None of:
   1.☒ Certified copies of the priority documents have been received.
   2.☐ Certified copies of the priority documents have been received in Application No. _____.
   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _3/21/08_.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the Amendments and Remarks filed 20
February 2008, in which claims 1-16, 18-32, and 34-47 were presented for examination.

Response to Arguments

Applicant's arguments filed 20 February 2008 have been fully considered but
they are not persuasive. Applicant contends the applied reference Gorday does not
create vehicle management information, but merely relative locations and direction
information. The Examiner disagrees. The claim language is not so limiting to exclude
Gorday's disclosure, the vehicle acquires a plurality of information of the own vehicle
including the relative location and vehicle status information, which meets the
reasonably broad claim. Applicant contends Gorday does not set up a routing condition
based on the vehicle management information. The Examiner disagrees. The limitation
"set up" is not specifically defined to establish specific steps. Gorday describes using
the acquired management information to express a predetermined criterion for routing
the message to surrounding vehicles, see [0016]. Applicant contends Gorday does not
teach routing condition and message reception conditions composed of predetermined
traveling requirements. The Examiner respectfully disagrees. Gorday teaches the
messages are routed in and received by predetermined conditions that are based on
the vehicle management information.

Claim Objections

Claim 19 is objected to because of the following informalities: lack of antecedent

basis for the limitation "the message reception condition" as all previous references to

this limitation were deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

Claims 1, 9, 12, 14, 16-19, 25, 28, 30, 32, 35, 41 and 44 are rejected under 35

U.S.C. 103(a) as being unpatentable over Gorday et al., US 2004/0192331, in view of

Lutter, US 2002/0198653.

(**Claim 1**) Gorday et al. discloses a method for forming an ad-hoc network

between vehicles to communicate vehicle management information between them

([0014]), comprising the steps of: collecting, by a source vehicle, its own vehicle driving

information, and creating vehicle management information of the source vehicle based

on the vehicle driving information ([0015]); setting up, by the source vehicle, a routing

condition and a message reception condition composed of predetermined vehicle

traveling requirements based on the vehicle management information ([0015]-[0016]),

and transmitting a vehicle management information message having the routing

condition, the message reception condition and the vehicle management information to

nearby vehicles ([0015]-[0016]); searching, by the nearby vehicles, for the routing

condition and the message reception condition upon receiving the vehicle management

information message ([0016]); determining, by the nearby vehicles, whether the nearby

vehicles route the vehicle management information message to another vehicle

according to whether vehicle driving information of the nearby vehicles satisfies the

routing condition ([0015]-[0016]). Gorday does not describe determining whether the

nearby vehicles should provide the management information to a driver after receiving

the information message after the driving information satisfies the routing condition.

However, Lutter teaches a message relay system wherein the receiving vehicle after

satisfying the conditions to receive the message, determined whether to provide the

vehicle management information after detecting the information (figure 5, [0032]) and

determining whether the nearby vehicle satisfies the message reception condition

([0020], [0041]). It would have been obvious to one of ordinary skill in the

communications art to combine the invention of Gorday with the teachings of Lutter

because as Lutter suggests, the information that is pertinent to the driver is only

displayed, such as messages referring to routing data ([0041]) and alls the vehicle to

particularly transmit the information to particular others ([0040]) and if the conditions are

satisfied the vehicle can used the stored information to determine conditions around it

([0033]).

(**Claim 14**) Gorday et al. discloses an apparatus for forming an ad-hoc network

between a source vehicle and nearby vehicles to communicate vehicle management

information between them, the apparatus comprising: a sensor for collecting vehicle

driving information including at least one of vehicle position, direction, and speed

information of the source vehicle ([0015]); a communicator for receiving a vehicle

management information message having vehicle management information of nearby

vehicles, a routing condition and a message reception condition of nearby vehicles from

the nearby vehicles (wireless communication modules, [0015]-[0016]), and for

comparing the vehicle traveling requirement included in the routing condition with the

collected vehicle driving information ([0016]-[0017]), determining whether the vehicle

management information message is routed to another vehicle according to the

compared result ([0016]); and a display for informing a driver of the collected vehicle

driving information and the vehicle management information ([0013]). Gorday does not

explicitly describe comprising a controller to receive the vehicle information and

transferring the information to the display; however, this is inherent in Gorday's

apparatus, that is describes as a PDA, wireless communication module, or like, wherein

a controller is required to perform Gorday's invention and described display of

information. Gorday does not specifically describe determining whether the vehicle

management information is transmitted to a controller according to whether the

collected vehicle driving information is compatible with the message reception condition.

However, Lutter teaches a message relay system wherein the receiving vehicle after

satisfying the conditions to receive the message, determining whether the vehicle

management information is transmitted to a controller according to whether the

collected vehicle driving information is compatible with the message reception condition

(figure 5, 7, [0041]-[0045]). It would have been obvious to one of ordinary skill in the

communications art to combine the invention of Gorday with the teachings of Lutter

because as Lutter suggests, the information that is pertinent to the driver is only

displayed, such as messages referring to routing data ([0041]) and alls the vehicle to

particularly transmit the information to particular others ([0040]) and if the conditions are

satisfied the vehicle can used the stored information to determine conditions around it

([0033]).

(**Claim 19**) Gorday et al. discloses an apparatus for forming an ad-hoc network

between a source vehicle and nearby vehicles to communicate vehicle management

information between them, the apparatus comprising: a sensor for collecting vehicle

driving information including at least one of vehicle position, direction, and speed

information of the source vehicle ([0015]); a communicator for receiving vehicle driving

information of nearby vehicles (wireless communication modules [0015]); a controller for

creating vehicle management information based on individual vehicle driving information

of the source vehicle and the nearby vehicles (while not illustrated, the controller is

inherent, [0015]-[0016]), setting up a predetermined routing condition for routing the

vehicle management information ([0015]-[0017]), inserting a predetermined vehicle

traveling requirement into the routing condition ([0017]), creating a vehicle management

information message having the routing condition, the message reception condition and

the vehicle management information (figure 5), and transmitting the vehicle

management information message (figure 3); and a display for informing a driver of the

vehicle driving information of the source vehicle and the vehicle management

information ([0013]). Gorday does not describe determining whether the information

included in the message received from the nearby vehicles is provided to the driver

according to whether the collected vehicle driving information is compatible with the

message reception condition. However, Lutter teaches a message relay system wherein the receiving vehicle after satisfying the conditions to receive the message, determining whether the vehicle management information is transmitted to a controller according to whether the collected vehicle driving information is compatible with the message reception condition (figure 5, 7, [0041]-[0045]). It would have been obvious to one of ordinary skill in the communications art to combine the invention of Gorday with the teachings of Lutter because as Lutter suggests, the information that is pertinent to the driver is only displayed, such as messages referring to routing data ([0041]) and alls the vehicle to particularly transmit the information to particular others ([0040]) and if the conditions are satisfied the vehicle can used the stored information to determine conditions around it ([0033]).

(**Claim 30**) Gorday et al. discloses a method for forming an ad-hoc network between a source vehicle and nearby vehicles to communicate vehicle management information between them comprising the steps of: collecting vehicle driving information including at least one of vehicle position, direction, and speed information of the source vehicle ([0015]); receiving a vehicle management information message having vehicle management information of the nearby vehicles ([0015]), a message reception condition and a routing condition including a predetermined vehicle traveling requirement from the nearby vehicles (figure 4, [0015]-[0016]), comparing the vehicle traveling requirement with the collected vehicle driving information, and determining whether the vehicle management information message is routed to another vehicle according to whether the vehicle driving information satisfies the routing condition ([0015]-[0017]); and informing

a driver of the vehicle driving information of the source vehicle ([0013]). Lutter further

teaches another known message reception condition, the comparing of the vehicle

information with the message routing condition and the display to the driver if that

comparison is met (figures 5, 7 and 8).

(Claim 35) Gorday et al. discloses a method for forming an ad-hoc network

between a source vehicle and nearby vehicles to communicate vehicle management

information between them comprising the steps of: collecting vehicle driving information

including at least one of vehicle position, direction, and speed information of the source

vehicle ([0015]); receiving a vehicle driving information of nearby vehicles from the

nearby vehicles ([0016]); creating vehicle management information based on the vehicle

driving information of the source vehicle and the nearby vehicles, setting up a routing

condition and a message reception condition for routing the vehicle management

information ([0015]-[0016]), inserting a predetermined vehicle traveling requirement into

the routing condition and the message reception condition ([0015]-[0017]), and creating

a vehicle management information message having the routing condition, the message

reception condition and the vehicle management information ([0016]-[0017]);

transmitting the vehicle management information message (figure 5); and informing a

driver of the vehicle driving information and the vehicle management information of the

source vehicle ([0013]). Lutter further teaches another known message reception

condition, the comparing of the vehicle information with the message routing condition

and the display to the driver if that comparison is met (figures 5, 7 and 8).

(**Claims 9, 25 and 41**) Gorday et al. further discloses wherein the rerouting condition further includes ID and routing area information of a routing vehicle and the message reception condition further includes ID information of a destination vehicle ([0016]-[0017]).

(**Claims 12, 28 and 44**) Gorday et al further discloses wherein the source vehicle sets the destination vehicle ID to a specified vehicle, sets the routing vehicle ID to an ID of the specified vehicle based on the vehicle driving information of the specified vehicle, and transmits the vehicle management information message to the specified vehicle (figures 2 and 3, [0016]).

(**Claims 16 and 32**) Gorday et al. further discloses wherein the vehicle traveling requirement includes at least one of vehicle position, speed, and direction information ([0015]).

(**Claim 18**) Gorday et al. further discloses the controller receives the vehicle management information message from the communicator if the communicator determines that the vehicle driving information is compatible with the vehicle traveling requirements defined in the message reception condition ([0014]).

Claim Rejections - 35 USC § 103

Claims 2, 3, 6-8, 15, 20, 23, 24, 31, 33, 34, 36, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorday et al. in view of Lutter, and in further view of Impson et al., US 6,708,107.

(**Claims 2, 15, 20, 31 and 36**) Gorday et al. discloses the method and apparatus as previously described, but does not detail the form of the message transferred

between vehicles. Impson et al. teaches an ad-hoc communication network between

vehicles, wherein the message transmitted contains in a header a routing condition

(figure 5, column 5, lines 30-61), and in the main body of the message vehicle

management information of the source vehicle (column 5, lines 5-17). It would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

method and apparatus of Gorday et al. with the teachings of Impson et al. because as

Impson suggests using a message format standard among vehicles enables efficient

cooperative participation between vehicle systems, allowing the system to target the

system needs and quickly discard non-relevant information (column 2, lines 14-43).

(Claims 3) Gorday et al. teaches wherein the step for searching the routing

condition includes the step of: searching, by the nearby vehicles, for the routing

condition upon receiving header information of the vehicle management information

message ([0014]); and comparing, with the nearby vehicles, their vehicle driving

information with the vehicle traveling requirements contained in the routing condition

([0014]-[0015]).

(Claims 6, 23, and 39) Gorday et al. describes wherein the source vehicle sets

up a message reception condition to allow only vehicles satisfying a prescribed vehicle

traveling requirements to receive the vehicle management information message

([0016]), includes the message reception condition in the routing condition, and then

transmits the message ([0016]).

(**Claims 7, 24 and 40**) Gorday et al. further describes wherein the vehicle traveling requirement includes at least one of vehicle position, speed, and direction information ([0015]).

(**Claims 8 and 34**) Gorday et al. further describes wherein the vehicle management information message is transmitted to a driver if the nearby vehicles are compatible with the message reception condition ([0014]).

Claim Rejections - 35 USC § 103

Claims 4, 5, 10, 11, 13, 21, 22, 26, 27, 29, 37, 38, 42, 43, and 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorday et al. in view of Lutter and Impson et al., and in further view of Kiendl et al., US 6,654,681.

Gorday et al. and Impson et al. describe methods and apparatus for forming an ad hoc network between vehicles to communicate vehicle management information and generally vehicle status information that may affect other vehicles, including speed, position, braking, turning, and possible traffic congestion, further creating a vehicle management information using at least one of the vehicle driving information and the vehicle safety information based on the source vehicle ([0015]). Neither reference specifically describes vehicle safety information based on the own vehicle and nearby vehicles. However, Kiendl et al. teaches a vehicle ad hoc network that teaches vehicles transmitting messages containing vehicle safety information based on the vehicle's own driving information and the vehicle driving information of the nearby vehicles (column 2, lines 15-30), and including at least one of position and direction of the source vehicle in the vehicle driving information (column 6, lines 45-63); and creating a vehicle

management information using at least one of the vehicle driving information and the vehicle safety information of the source vehicle (column 6, lines 16-63). Kiendl et al. further teaches wherein the vehicle safety information includes: a first warning message indicating an imminent traffic collision between vehicles (column 6, lines 16-27); a second warning message indicating a traffic accident occurrence (column 13, lines 24-33), and a third warning message indicating the entrance of the source vehicle to a crossroads (column 11, line 60-column 12, line 10). Kiendl et al. further teaches wherein the vehicle driving information includes information indicating a traffic accident occurrence of the source vehicle (column 13, lines 24-33). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method and apparatus of Gorday in view of Impson, with the teachings of Kiendl because as Kiendl suggests, transmitting information regarding vehicle safety status increases the efficiency and relevancy of the information transmitted, allowing vehicles to receive and determine the most efficient route of travel and warn drivers of potential unsafe driving events (column 3, lines 39-59 and column 4, lines 23-39).

Kiendl et al. further teaches the source vehicle sets the routing vehicle ID and destination vehicle ID to a null value and broadcasts the vehicle management information message to the nearby vehicles (column 13, lines 1-22). Kiendl et al. further teaches the source vehicle sets the routing area to a predetermined area, sets vehicle position information contained in the vehicle traveling requirement of the message reception condition to a reference position of the routing area, and broadcasts the vehicle management information message to nearby vehicles contained in the

predetermined area (Column 12, line 59-column 13, line 22). Kiendl et al. further

teaches wherein the source vehicle sets up a plurality of routing vehicle IDs, and

transmits the vehicle management information message to the specified vehicle using a

flooding method (column 4, lines 50-65). It would have been obvious to one of ordinary

skill in the art at the time of the invention to combine the method and apparatus of

Gorday in view of Impson with the teachings of Kiendl et al. because as Kiendl et al.

suggests allowing the vehicle to direct the destination of the messages increases the

efficiency and safety of the system by allowing only the vehicles within a certain range

or area to receive event information, further increasing the efficiency of the

transmissions of the group (column 11, lines 39-60).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHRISTINE M. BEHNCKE whose telephone number is

(571)272-8103. The examiner can normally be reached on 8:30 am- 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

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CMB

/Thomas G. Black/
Supervisory Patent Examiner, Art Unit 3661